# Oregon DEQ Division 33 Review Summary Sheet



**Application Information** 

Applicant Name:	John Griffin	Application Number:	G-19207		
			0.0088 CFS, further		
Basin & Sub-basin:	Willamette, Clackamas	Requested Water Amount:	limited to 6.37 AF from		
			Well 1 (CLAC 68594)		
Nearest Surface	NE Doop Crook	Nearest Receiving	NF Deep Creek		
Water:	NF Deep Creek	Waterbody:			
Droposed User	Nurson, uso on 1E 1 acros	Requested Period of Use:	January 1 through		
Proposed Use:	Nursery use on 15.1 acres	Requested Period of Ose:	December 31		

**Division 33 Geographic Area** 

$oxtimes$ Lower Columbia $\overline{oxtime}$ Upper Columbia $oxtimes$ Statewide			
<b>Upper and Lower Columbia Basins only</b> : Based upon the review completed below, does the proposed use comply with existing state and federal water quality standards or may conditions be applied to bring the use into compliance?	□No	⊠ Yes	☐ Insufficient data
<b>Statewide:</b> Will the proposed use result in water quality impacts that will cause either "loss" or "net loss" of essential habitat of sensitive threatened or endangered (ST&E) fish species? (Note: the presence of ST&E fish species is determined by Oregon Department of Fish and Wildlife.)	□No	⊠ Yes	☐ Insufficient data

# **Recommended Pre-Proposed Final Order Actions**

1.
Mitigation Obligation   ☑ No ☐ Yes
Prior to issuance of a Proposed Final Order, the applicant shall submit a mitigation proposal that is of no less
volume and rate than the permitted use. The proposal shall include water that is sourced upstream of the point
of diversion or appropriation, or the uppermost point on the stream at which the potential for surface water
interference occurs. If a surface water right is used for mitigation, it shall be transferred instream for the
[month-month] time period and of similar water quality. The applicant should contact their OWRD caseworker
to discuss flow mitigation options. Flow mitigation is site-specific, therefore DEQ recommends written approval
of the mitigation proposal by DEQ prior to issuance of a proposed final order.

## **Recommended Permit Conditions**

- 1. Water Quality: All water use under this permit shall comply with state and federal water quality laws. The permittee shall not violate any state and federal water quality standards, shall not cause pollution of any waters of the state, and shall not place or cause to be placed any wastes in a location where such wastes are likely to escape or be carried into the waters of the state by any means. The use may be restricted if the quality of source stream or downstream waters decrease to the point that those waters no longer meet existing state or federal water quality standards. Permittee is responsible for obtaining any necessary state and federal permits.
- 2. Agricultural Water Quality Management Area Rules: The permittee shall comply with basin-specific Agricultural Water Quality Management Area Rules described in Oregon Administrative Rule Chapter 603-095. The permittee shall protect riparian areas, including through irrigation practices and the management of any livestock, allowing site capable vegetation to establish and grow along streams, while providing the following functions: shade (on perennial and some intermittent streams), bank stability, and infiltration or filtration of overland runoff.

3.	Flow Restrictor: The permittee shall permitted rate. The valve shall be in before a certificate is issued. The valvater right.	place	, funct	tional,	and ve	rified b	y the	Certif	fied W	ater Ri	ghts E	xamin	
4.	Limit Period of Use: Water use shall	be lir	nited t	o the p	period	Decen	nber 1	thro	ugh Ap	oril 30			
5.													
Seas	sonal Limitations												
Re	ason for limitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	IDL: 2024 Willamette Temp Critical riod					$\boxtimes$		$\boxtimes$	$\boxtimes$				
W	AB: 20% flow threshold exceeded							$\boxtimes$	$\boxtimes$	$\boxtimes$			
Otl	ner: Instream flow requirement not							$\boxtimes$	$\boxtimes$		$\boxtimes$		
like	ely met												
	_												
		⊠ Ye											
	Q understands WRD has determined		-	_					•				
sut	ostantial interference (PSI) with North	1 Fork	реер	Creek,	so sur	tace wa	iter av	allab	ility mi	ust be	consid	dered.	
gro	RD completed a groundwater availabioundwater resource is over-appropriabilable for the proposed use.	ted dı	uring a	iny per	iod of	the pro							the
The	e TMDL critical period for temperatur	e is M	lay 1 th	nrough	Octob	er 31.							
	the event WRD issues a permit, DEQ rember 1 through April 30 to preven							_	•		use to	)	
	eragency consultation: [Describe any s discussed?]	/ subs	tantia	l intera	agency	consul	Itation	ı. Wh	o was	conta	cted a	nd wh	at
DE	Q review prepared by: Steven I	Parret	t	[	Date co	omplete	e: 2/2	1/20	25				
An	tidegradation Policy:  The purpose of DEQ's Antidegradation quality to prevent unnecessary furth pollution, and to protect, maintain, a all existing beneficial uses. Oregon's increased water use.	er de and er	gradat nhance	ion fro e existi	m nev	v or inci face wa	reased Iter qu	d poir iality	nt and i	nonpo ure th	int so e full p	urces o protect	f ion of
1.	Temporary Use or Net Benefit Does the applicant propose a tempo has determined provides a net ecolo human health and welfare, for which to threatened and endangered special If yes, recommend approval of the a	ogical n the a ies?	benefi applica	t, or a	tempo demo	rary (la nstrate ⊠ No	sting   ed that	ess they	han six will m Yes	mont inimiz	hs) us e adve	e to pro erse eff	otect fects
	the habitat of ST&E fish species. You	may	skip to	Quest	ion 7.								

2.	•		_	tanding Resourc	ce Water with critical habitat  Yes				
	If yes, then priquestion 7.	or to permit issuan	ce, the applicant must provid	e suitable flow r	nitigation. You may skip to				
3.	. Water Quality Limited Is this source Water Quality Limited or a tributary to a water quality limited water body? Note: limit downstream review to 6 <sup>th</sup> field HUC for parameters that diminished flow can affect (temperature, dissolved oxygen, pH, etc.). □ No ☑ Yes								
	Integrated Re	port 303(d) List Sur	nmary Table						
	Assessment Unit Name	Assessment Unit Description	Parameter	Status*	Beneficial Uses				
	HUC12 Name:	Make websel Link	Biological Criteria	Category 5	Fish and Aquatic Life				
	North Fork	Watershed Unit	Dissolved Oxygen spawn	Category 5	Fish and Aquatic Life				
	Deep Creek-	(1st through 4th	-						

\*Integrated Report Category

Deep Creek

Deep Creek

order streams)

Headwaters WA
Unit to confluence

with Clackamas

River

Category 4 - Data indicate that at least one designated use is not supported, but a TMDL is not needed to address the pollutant

Dissolved Oxygen year-round

**Biological Criteria** 

Category 4A - Clean-up plans (also called TMDLs) that will result in the waterbody meeting water quality standards and supporting its beneficial uses have been approved

Category 5

Category 5

Fish and Aquatic Life

Fish and Aquatic Life

Category 4B - Other pollution control requirements are expected to address pollutant of concern and will result in attainment of water quality standards

**Category 4C** - The impairment is caused by pollution, not a pollutant. For example, flow, or lack of flow, are not considered pollutants, but may be affecting the waterbody's beneficial uses

**Category 5** - Data indicate a designated use is not supported or a water quality standard is not attained and a TMDL is needed. This category constitutes the Section 303(d) list that EPA will approve or disapprove under the Clean Water Act

Analysis: [If the answer to question 3 is yes, then describe how the use does or does not comply with existing state and federal water quality standards, and how the use may affect ST&E fish species habitat.]

#### **Biological Criteria**

Waters of the State must be of sufficient quality to support aquatic species without detrimental changes in the resident biological communities. Oregon's biological criteria narrative standard is based on EPA guidance recommending using biological community assessments as an indicator for aquatic life beneficial use support. Resident biological communities are the local food webs that support fish and other aquatic life. Reduced flows, habitat loss, and increases in pollutant loads or concentrations may degrade the biological community onsite or downstream and therefore result in the diminution of habitat for ST&E species.

## **Dissolved Oxygen**

Decreased dissolved oxygen levels adversely impact sensitive, threatened, and endangered fish. Oregon's dissolved oxygen limits are based on the most sensitive species and the life history stage of those species at the location and season of concern. The Clackamas River does not meet Oregon's spawning dissolved oxygen standards. Reduced flows may increase water temperature and reduce surface area and turbulence, which can decrease dissolved oxygen. Therefore, reducing flow in waterbodies that are connected to downstream

dissolved oxygen-impaired waterbodies, such as North Fork Deep Creek, could result in lower stream dissolved oxygen levels and stressed conditions for aquatic life, particularly during the summer months when stream flow is lowest. If year-round standard triggered: The critical warm period when stream conditions are most likely to exceed the year-round dissolved oxygen standards is July 1 – September 30.

Recommended Conditions: [Consider if water quality can be protected by limiting the rate and quantity of water used, period of use, or by including other permit conditions.]

Water Quality, Agricultural Water Quality Management Area Rules, Flow Restrictor, Limit Period of Use

## 4. Total Maximum Daily Load Summary

Are there TMDLs established for parameters identified as being affected by flow modification?  $\square$  No  $\boxtimes$  Yes

## Analysis:

In all perennial and intermittent streams in the Willamette Basin excluding specific waterbodies where the 2006 Willamette Temperature TMDL is still applicable, the effective TMDL is the 2024 Willamette Subbasins Temperature TMDL.

DEQ established a temperature TMDL in 2024 for all perennial and intermittent streams in the Willamette Basin. Water temperatures generally increase as flow decreases. Oregon's temperature standard specifies that sources of anthropogenic heating may result in no more than a 0.3 C increase in stream temperature. Since stream temperature heating may occur from cumulative interactions between upstream and local sources, the TMDL applies to all perennial and intermittent surface waters within the Willamette Basin, rather than only 303(d) listed waterbodies.

Reducing flow in waterbodies impaired for temperature, particularly during the summer months with the lowest stream flow could result in higher stream temperatures and stressed conditions for aquatic life.

## Clackamas Subbasin

The Clackamas Basin is a subbasin within the Willamette River Basin. The 2006 Willamette River Basin TMDL has approved TMDLs for temperature and bacteria. The 2024 Willamette Subbasins Temperature TMDL replaces the 2006 temperature TMDL in the Clackamas Basin.

The Willamette Basin Temperature TMDL notes that stream temperature is influenced by natural factors such as climate, geomorphology, hydrology, and vegetation. Human influenced or anthropogenic heat sources may include discharges of heated water to surface waters, the loss of streamside vegetation, and reductions in stream shading, changes to stream channel form, and reductions in natural streamflows.

The critical period for temperature in the Clackamas Subbasin is May 1 through October 31.

Recommended Conditions: [Consider if water quality can be protected by limiting the rate and quantity of water used, period of use, or by including other permit conditions.]

Water Quality, Agricultural Water Quality Management Area Rules, Flow Restrictor, Limit Period of Use

#### 5. Cumulative Withdrawals Effects

Watershed ID	Exceedance		Natural						
	Level	Month	Stream	Consumptive Use	Expected Stream Flow	Reserved Stream Flows	Instream Requirement	Net Water Available	Percent of Flow
137	50	JAN	71.9	1.34	70.6	0	20	50.6	1.8637
137	50	FEB	60.2	1.14	59.1	0	20	39.1	1.893688
137	50	MAR	42.8	0.535	42.3	0	20	22.3	1.25
137	50	APR	40.6	0.553	40	0	20	20	1.362069
137	50	MAY	26.2	0.834	25.4	0	20	5.37	3.183206
137	50	JUN	13.4	1.09	12.3	0	3	9.31	8.134328
137	50	JUL	4.49	1.77	2.72	0	3	-0.28	39.42094
137	50	AUG	2.03	1.47	0.56	0	1	-0.44	72.41379
137	50	SEP	1.72	0.7	1.02	0	1	0.02	40.69767
137	50	OCT	2.3	0.35	1.95	0	2.3	-0.35	15.21739
137	50	NOV	22.1	0.475	21.6	0	20	1.62	2.149321
137	50	DEC	80.3	1.49	78.8	0	20	58.8	1.855542
137	50	ANN	22100	710	21400	0	9050	12500	3.21267
Recomn period c	n responses to ds or can comp ed through flo No  nended Condi	o questio oliance w w mitiga \tions: [If r permit	ns 3, 4, ar vith state a tion and/ Yes water qua condition	te and Federal and 5, is the use and federal wa or by imposing ality can be pro s, then select a	in compliar ter quality permit cor tected by n	nce with sta standards b ndition(s)? nodifying o	ate and federal be assured, and r limiting the a	I ST&E habi	tat loss
				<b>al Water Quali</b> ers of the state	e. Are there	additional	water quality i	mpairment	s that

6.

7.

#### PRE-PROPOSED FINAL ORDER ACTIONS

DEQ recommends that the applicant provide suitable replacement water as mitigation for anticipated impacts to water quality and more specifically the habitat of sensitive, threatened, and endangered fish species. Additional mitigation may be required from other Interagency Review Team members (for example: OWRD may require mitigation for periods when water is not available). Surface water flow mitigation is unlikely to provide the same benefit that groundwater can provide to gaining stream reaches. However, if groundwater mitigation is unavailable within the same aquifer, surface water mitigation may provide suitable mitigation.

## Flow Mitigation Obligation:

Prior to issuance of a Proposed Final Order, the applicant shall submit a mitigation proposal that is of no less volume and rate than the permitted use. The proposal shall include water that is sourced upstream of the point of diversion or appropriation, or the uppermost point on the stream at which the potential for surface water interference occurs. If a surface water right is used for mitigation, it shall be instream for the *month - month time* period and of similar water quality. The applicant should contact their OWRD caseworker to discuss flow mitigation options.

**Riparian:** If the riparian area is disturbed in the process of developing, modifying or repairing a point of diversion under this water use permit, the permittee shall be responsible for restoration and enhancement of such riparian area in accordance with the Oregon Department of Fish and Wildlife's Habitat Mitigation Policy described in Oregon Administrative Rule OAR Chapter 635-415. Prior to development, modification or repairs at the point of diversion, the permittee shall submit, to the Oregon Water Resources Department, either a Riparian Mitigation Plan approved in writing by Oregon Department of Fish and Wildlife (ODFW) or a written declaration from ODFW that riparian mitigation is not necessary. The permittee shall maintain the riparian area for the life of the permit and subsequent certificate per the approved Riparian Mitigation Plan. The permittee is hereby directed to contact the local Oregon Department of Fish and Wildlife Fish Biologist prior to development of the point of diversion.

Water Storage Construction: The applicant shall locate the reservoir outside of the stream's natural channel. identify waterbody and set back to prevent stream capture and justification for distance selected.

(Note to reviewer: The 1200C permit requires a 50-foot setback, which is cited from the National General Construction Permit OAR-660-023-0090(5). Requiring the storage reservoir to be outside of the mapped 100 year floodway may also be a protective buffer.)

**Construction Activities:** 1200-C NPDES Stormwater Construction permit coverage is required from DEQ or Agent for construction activities (clearing, grading, excavation, grubbing, stumping, demolition, staging, stockpiling and other land disturbing activities) that will disturb one or more acres, or that will disturb less than one acre of land but is part of a common plan of development or sale that will ultimately disturb one or more acres of land and have the potential to discharge to surface waters or to a conveyance system that leads to surface waters of the state.

**In-Water or Riparian Construction**: For in-water or riparian construction, permittee may be required to obtain additional permits from the Oregon Department of State Lands, the U.S. Army Corps of Engineers, and the DEQ Section 401 certification program prior to construction. The applicant must contact these agencies to confirm requirements.

**Herbicide Applications**: When herbicide application is within three feet of water, the permittee is responsible for ensuring that herbicide application laws are met, and that they obtain from DEQ any necessary pesticide application permits, including the 2300-A Pesticide General Permit or the 2000-J NPDES General Permit. Polluted return flows are not allowed to enter waters of the state per ORS 468B.025(1).

#### STANDARIZED MENU OF CONDITIONS

**Water Quality**: All water use under this permit shall comply with state and federal water quality laws. The permittee shall not violate any state and federal water quality standards, shall not cause pollution of any waters of the state, and shall not place or cause to be placed any wastes in a location where such wastes are likely to escape or be carried into the waters of the state by any means. The use may be restricted if the quality of source stream or downstream waters decrease to the point that those waters no longer meet existing state or federal water quality standards. Permittee is responsible for obtaining any necessary state and federal permits.

**Agricultural Water Quality Management Area Rules**: The permittee shall comply with basin-specific Agricultural Water Quality Management Area Rules described in Oregon Administrative Rule Chapter 603-095. The permittee shall protect riparian areas, including through irrigation practices and the management of any livestock, allowing site capable vegetation to establish and grow along streams, while providing the following functions: shade (on perennial and some intermittent streams), bank stability, and infiltration or filtration of overland runoff.

**Flow Restrictor:** The permittee shall install a flow control valve on the diversion system to limit use to the permitted rate. The valve shall be in place, functional, and verified by the Certified Water Rights Examiner before a certificate is issued. The valve or a suitable replacement shall remain in place for the life of the water right.

**Limit Rate**: Water withdrawal shall be limited to *Enter CFS or AF for the defined period, or a month by month rate or volume*.

**Limit Period of Use**: Water use shall be limited to the period: *start date through end date*.

(Note to reviewer: Do not split the irrigation season. Require mitigation if water is not available during the requested time period.)

**Limit Diversion**: The permittee shall not divert water under this water use permit unless streamflow in the waterbody name is at or above CFS cubic foot per second, as determined at Gaging Station ID .

**Off-Channel Stored Water Releases**: The permittee shall not release polluted water from this off-channel reservoir into waters of the state except when the release is directed by the State Engineer to prevent dam failure.

**On-Channel Reservoir**: The permittee shall design and operate the water storage facility such that all waters within and below the reservoir meet water quality criteria. The permittee shall develop a reservoir operations plan that details how water quality criteria and standards will be met. A Certified Water Rights Examiner shall verify that the reservoir operations are consistent with the plan before a certificate is issued. The reservoir operator shall maintain a copy of the plan and make it available for review upon request.

**Restrict Reservoir Release:** To prevent pollution downstream, the permittee shall not release water from the reservoir when the flow at Gaging Station ID (gage name) is below the Mean Daily Discharge of *CFS* (discharge which was equaled or exceeded for 90% percent of the time) except when the release is directed by the State Engineer to prevent dam failure.

**Live Flow**: Once the allocated volume has been stored, permittee shall pass all live flow downstream at a rate equal to inflow, using methods that protect instream water quality.

**Lining**: The permittee shall line the reservoir with *include material or allowable infiltration rate* to minimize seepage and protect groundwater quality per Oregon Administrative Rule 340-040. The liner is to be in place,

inspected, and approved by the Certified Water Rights examiner prior to storage of water. \*If the liner fails, the water user shall replace it within one calendar year. **Site-Specific Condition**: The permittee shall

<sup>\*</sup> OAR 690-410-0010(2)(a), OAR 690-310-0120, OAR 690-310-0140

# Appendix: General Overview, Instructions for Water Availability Analysis, and Process Flow Chart

## **General Overview**

The purpose of OAR Chapter 690, Division 33 is to aid the Oregon Water Resources Department (OWRD) in determining whether a proposed use will impair or be detrimental to the public interest with regard to listed sensitive, threatened, or endangered (ST&E) fish species. Oregon's stream temperature, dissolved oxygen (DO), pH and several other water quality standards are based on the life cycle needs of salmonids and other resident fish and aquatic life. Exceeding the standards can disrupt the life cycle of a ST&E fish species and may cause death. In addition, OWRD must consider water quality impacts as part of a public interest review, OAR 690-310-0120. Water quality impacts and conditions unrelated to ST&E species should be noted as "Division 310" in the recommendations to OWRD. The DEQ's Water Right Application Review Procedures document contains a full description of the review process.

The two main categories of Division 33 reviews are based on the geographic distribution of ST&E fish species:

- o **For Proposed Uses in the Columbia River Basin,** reviews must determine whether a proposed use complies with existing state and federal water quality standards. Upper Columbia applications specifically require applicants to provide evidence that the proposed use complies with existing state and federal water quality standards. <u>Geographic scope</u>: Columbia River Basin (includes all waters that ultimately drain into the Columbia River).
- o **For Proposed Uses Statewide**, review is conducted under the "Statewide review" procedure. Statewide reviews must determine whether a proposed use may affect ST&E fish species habitat. The statewide review procedure is intended to identify permit conditions that can prevent the "loss" or "net loss" of essential habitat of ST&E fish species. When permit conditions cannot be identified that meet this standard, then the DEQ recommends denial of the permit. <u>Geographic scope</u>: all areas outside the Columbia River Basin where OWRD determines ST&E fish species are present.

## Instructions for Populating the Water Availability Summary Table using data from OWRD's WAB (Section 5)

- Open OWRD's Water Availability Reporting System.
- Search for the water availability basin of interest. Select 50% exceedance. The 50% exceedance stream flow is the stream flow that occurs at least half of the time.
- The water availability analysis will display a nested list of watersheds that contain the POD. Select the highest nesting order WAB that contains the POD.
- Download to an Excel spreadsheet. Percent of flow is calculated using this equation:

$$Percent of Flow = \frac{Consumptive Use}{Natural Stream Flow} * 100$$

You may choose to add the proposed rate (or storage amount) to the consumptive use.

## **Instructions for Water Availability Analysis**

To complete Section 6, review and consider the cumulative impact of consumptive withdrawals using the OWRD WAB. All water withdrawals and the following factors should be considered when conducting a water availability analysis.

- Instream Flow: Consider the percent of natural flow removed from the stream in each month (see right-most column in Water Availability and Cumulative Impacts Summary Table). Based on best professional judgment, evaluate if the cumulative withdrawal is likely to cause impairment to aquatic life or water quality. Water quality standards are established to protect aquatic life. In scientific literature, researchers have identified ecological harm occurring when flows are reduced by >6-35% of daily flow<sup>1</sup>. Consider the seasonality of any listings and season of withdrawal to determine impact for each month of the year.
- Antidegradation: Rule 340-041-0004 applies: withdrawals cannot cumulatively increase a waterbody's temperature by more than 0.5 degrees Fahrenheit or cause a 0.1 mg/l decrease in dissolved oxygen from the upstream end of a stream reach to the downstream end of the reach so long as it has no adverse effects on threatened and endangered species. See OAR 340-041-0004(3)-(5) for a description in rule of activities that do not result in lowering of water quality.
- Flow modification: Consider if cumulative withdrawals are contributing to flow modification and a likely limiting factor in the waterbody at certain times of the year. Temperature and dissolved oxygen are flow-related parameters. When streamflow is reduced, assimilative capacity is reduced. As a waterbody heats up, dissolved oxygen concentrations decline. Reduced stream flows (including groundwater inputs to streamflow), exacerbate temperature and/or dissolved oxygen impairments.
- **Temperature**: Increases in temperature or a reduction in dissolved oxygen adversely impacts ST&E fish. Fish require different temperature and concentrations of dissolved oxygen based on species and life history stage. Oregon's temperature and dissolved oxygen limits are based on the most sensitive species and the life history stage of those species at the location and season of concern. Additional heat or reduction in dissolved oxygen concentrations will further impact these species habitat. Reduced flows can also increase the concentrations of phosphorous, bacteria, pesticides and metals.

# **Instructions for Calculating "Limit Diversion" Rate**

This condition is selected to limit withdrawals once the cumulative withdrawals in the watershed have exceeded the protective threshold of 20 percent and/or the ISWR is not fully protective of aquatic life. A different value can be selected, but the reviewer should state why a particular percent was selected.

"Natural stream flow" is obtained from OWRD's Water Availability Reporting System. The condition is applied on a monthly timeframe based on OWRD's data.

"Natural stream flow" – (percent of flow \* "natural stream flow") = Expected Stream Flow

The applicant would have to stop using when instream flows drop below the Expected Stream Flow.

Example:

Natural stream flow for a particular month = 1200 CFS

1200 CFS - (.2 \* 1200 CFS) = 960 CFS

<sup>&</sup>lt;sup>1</sup> Richter BD, Davis MM, Apse C, Konrad C. 2011. Short Communication, A Presumptive Standard For Environmental Flow Protection. River Research and Applications. Published online in Wiley Online Library (wileyonlinelibrary.com), DOI: 10.002/rra.1551

#### **DEQ Water Right Review Flow Chart**

